HVOF (High Velocity Oxy-Fuel)
Materials Guide
**Introduction**

Sulzer Metco offers a broad product portfolio of materials for the HVOF process. These materials are specially formulated and optimized to produce high quality coating results for HVOF applications, and in particular, for use with Sulzer Metco Diamond Jet® coating systems. Coatings of these materials solve a variety of tough surface engineering problems, such as low temperature and high temperature wear resistance, oxidation and corrosion resistance, dimensional restoration for critical components, and more.

While the products in this guide represent our standard HVOF materials portfolio, many customers around the world have turned to Sulzer Metco to provide HVOF materials for their specific needs and requirements. We invite you to challenge us with yours, including sensitive, proprietary projects. Materials with particle sizes and distributions optimized for other HVOF spray systems, such as Jet Kote®, JP-5000™ and other gas and liquid fueled systems are available upon request. Please contact your Sulzer Metco sales representative for details.

Our quality commitment is evidenced by our ISO 9001/AS 9000 quality standards and NADCAP approved laboratories. Materials composition and particle size are verified through a stringent in-process testing program, with fine particle sizes verified using air classification. While coatings meeting these certifications are mandated for certain applications, compliance assures that our off-the-shelf solutions and custom thermal coating materials perform to your own demanding requirements.

For a complete listing of Sulzer Metco materials for all thermal spray processes, please refer to our *Thermal Spray Materials Guide*.

(Jet Kote is a registered trademark of Deloro Stellite. JP-5000 is a trademark of Praxair.)

**Product Availability**

The majority of the products listed in this guide are available worldwide; however, some products are only available on a regional basis. Regionally available products may be obtainable outside of the specified region as a special order. Please contact your Sulzer Metco account representative for further information.

Products, or product sizes, marked with this symbol are available only in Europe: EU

Products, or product sizes, marked with this symbol are available only in the Americas: AM

**Chemical Symbols Used In This Guide:**

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Metals, Alloys and Blends / Cobalt Base

New! Diamalloy 4454
Chemistry: Co 32Ni 21Cr 8Al 0.5Y
Particle Size: -45 +22 µm (-325 mesh +22 µm)
Morphology: Spheroidal, Gas Atomized
Properties & Applications: Provides oxidation and hot corrosion resistance for hot section turbine components where thicker coatings are required.

AMDRY 9951
Chemistry: Co 32Ni 21Cr 8Al 0.5Y
Particle Size: -37 +5 µm (-400 mesh + 5 µm)
Morphology: Spheroidal, Gas Atomized
Properties & Applications: For demanding aerospace applications in a size which suitable for chambered plasma spray. Used for protection in hot corrosive or oxidizing environments up to approximately 1050°C (1920°F) for heat treated chambered coatings.

OEM Specifications:
- Rolls-Royce MSRR 9507/73
- SNECMA DMR 33.095

AMDRY 9954
Chemistry: Co 32Ni 21Cr 8Al 0.5Y
Particle Size: -62 + 11 µm
Morphology: Spheroidal, Gas Atomized
Properties & Applications: For demanding aerospace applications in a size which is suitable for chambered plasma spray or air plasma spray. Used for protection in hot corrosive or oxidizing environments up to approximately 1050°C (1920°F) for heat treated chambered coatings and approximately 850°C (1560°F) for aps coatings.

OEM Specifications:
- GE B50TF195, Class A
- Honeywell Allied Signal EMS 57741, Grade B
- Howmet CD 1128

New! Diamalloy 4700
Chemistry: Co 32Ni 21Cr 8Al 0.5Y
Particle Size: -45 +15 µm (-325 mesh + 15 µm)
Morphology: Spheroidal, Gas Atomized
Properties & Applications: For demanding aerospace applications in a size which is suitable for HVOF spray. Used for protection in hot corrosive or oxidizing environments.

OEM Specifications:
- Rolls-Royce MSRR 9507/86

Diamalloy 3002NS
Chemistry: Co 28Mo 8Cr 2Si
Particle Size: -45 +5.5 µm (-325 mesh +5.5 µm)
Morphology: Water Atomized
Properties & Applications: Similar to Tribaloy® 400. Coatings perform well in reducing environments such as hydrochloric, formic and sulfuric acids; oxidizing environments, such as ferric chloride; non-oxidizing environments, such as phosphoric and acetic acid and salt water. Particularly suitable where lubrication is low or non-existent. Excellent sliding wear resistance combined with good hot corrosion resistance and moderate oxidation resistance, at temperatures to approximately 800°C (1470°F).

OEM Specifications:
- GE B50TF155, Class A
### Diamalloy 4060NS

**Chemistry:** Co 28Cr 4W 3Ni 3Fe 1.5Si 1C 1Mo  
**Particle Size:** -45 +11 µm (-325 mesh +11 µm)  
**Morphology:** Spheroidal, Gas Atomized  
**Properties & Applications:** Similar to Stellite® 6. Used as a general restoration and repair material. Forms dense, wear resistant, oxidation resistant coatings which may be used for turbine hot section applications such as combustion liners. Formerly sold as XPT-D-1056. (*Stellite is a registered trademark of Deloro Stellite, Inc.*)

**OEM Specifications:**  
GE B50A960

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### Diamalloy 3001NS

**Chemistry:** Co 28Mo 17Cr 3Si  
**Particle Size:** -45 +5.5 µm (-325 mesh +5.5 µm)  
**Morphology:** Water Atomized  
**Properties & Applications:** Similar to Tribaloy® 800. Coatings perform well in reducing environments such as hydrochloric, formic and sulfuric acids; oxidizing environments, such as ferric chloride; non-oxidizing environments, such as phosphoric and acetic acid and salt water. Particularly suitable where lubrication is low or non-existent. Excellent sliding wear resistance combined with good hot corrosion resistance and moderate oxidation resistance, at temperatures to approximately 800°C (1470°F). (*Tribaloy is a registered trademark of Deloro Stellite, Inc.*)

**OEM Specifications:**  
GE B50TF190, Class A
**Diamalloy 1007**
Chemistry: Cu 99%
Particle Size: -88 +31 µm
Morphology: Spheroidal, Gas Atomized
Properties & Applications: Good electrical and thermal conductivity. Used in the paper and printing industry to resist corrosive effects of inks. Can be used for build-up and repair of copper base alloys. Non-magnetic, can be used for electromagnetic shielding.

**Diamalloy 1004**
Chemistry: Cu 9.5Al 1Fe Aluminum Bronze
Particle Size: -45 +15 µm (-325 mesh +15 µm)
Morphology: Spheroidal, Gas Atomized
Properties & Applications: Typical parts which may be coated are pumps (cavitation resistance), piston guides (soft bearing surfaces), shifter forks and compressor air seals. Moderate oxidation, wear and fretting resistance at low temperatures, good emergency dry running properties. Can be used for build-up and repair of copper base alloy parts. Melting temperature 1040°C (1900°F).
**Metals, Alloys and Blends / Iron Base**

**Diamalloy 1003**
Chemistry: Fe 17Cr 12Ni 2.5Mo 1Si 0.1C (AISI Type 316 stainless steel)
Particle Size: -45 +11 µm (-325 mesh +11 µm)
Morphology: Spheroidal, Gas Atomized
Properties & Applications: Premium grade austenitic nickel-chrome stainless steel. Coatings can be easily machined. Recommended for cavitation and low temperature erosion resistance.

**Diamalloy 1008**
Chemistry: Fe 17Cr 11Mo 3Ni 3Si 3Cu 4B 0.4C
Particle Size: -45 +5.5 µm (-325 mesh +5.5 µm)
Morphology: Blend
Properties & Applications: Iron based hardfacing material developed for corrosive wear applications below 650ºC (1200ºF).

**Diamalloy 4010**
Chemistry: Fe 30Mo 2C
Particle Size: -45 +5.5 µm (-325 mesh +5.5 µm)
Morphology: Blend
Properties & Applications: Developed as an alternative to hard chrome plating. Protection against abrasive grains, wear from hard bearing surfaces and fretting.
**Diamalloy 4008NS**
Chemistry: Ni 5Al  
Particle Size: -45 +11 µm (-325 mesh +11 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Coatings are dense and resistant to oxidation and abrasion. Used as an oxidation-resistant bond coats which can be used up to 800°C (1470°F). Self-bonding and undergoes an exothermic reaction during spraying, resulting in excellent bonding to the substrate. Applications: salvage and build-up on machinable carbon and corrosion resistant steels, particle erosion resistance for exhaust valve seats, oxidation resistance for exhaust mufflers and heat treating fixtures.

**OEM Specifications:**  
GE B50TF56, Class C  
Rolls-Royce Allison EMS 39661

**New! AMDRY 4532**
Chemistry: Ni 20Cr  
Particle Size: -45 +11 µm (-325 mesh +11 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Coatings are dense and designed to resist oxidation and corrosive gases in temperatures to 980°C (1800°F). Used to resist heat and prevent scaling of carbon and low alloy steels in hot atmospheres.

**New! AMDRY 4535**
Chemistry: Ni 20Cr  
Particle Size: -45 +22 µm (-325 mesh +22 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: High deposit efficiency material that produces coatings that are dense and designed to resist oxidation and corrosive gases in temperatures to 980°C (1800°F). Used to resist heat and prevent scaling of carbon and low alloy steels in hot atmospheres.

**Diamalloy 1005**
Chemistry: Ni 21.5Cr 8.5Mo 3Fe 0.5Co  
Particle Size: -45 +11 µm (-325 mesh +11 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Similar to Inconel® 625 and intended for restoration of worn or mismachined components of Inconel 625 or similar material. (Inconel is a registered trademark of INCO)

**Diamalloy 4004NS**
Chemistry: Ni 14Cr 9.5Co 5Ti 4Mo 4W 3Al  
Particle Size: -45 + 15 µm (-325 mesh + 15 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Similar to RENE® 80. Oxidation and corrosion resistance up to 1000°C (1850°F). Applications: surface restoration of worn or damaged parts such as airfoils, combustors, blades or vanes in gas turbines. (*RENE is a registered trademark of GE)

**Diamalloy 1006**
Chemistry: Ni 19Cr 18Fe 3Mo 1Co 1Ti  
Particle Size: -45 +11 µm (-325 mesh +11 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Similar to Inconel® 718. Superalloy powder intended for restoration of worn or mismachined Inconel® 718 components. (Inconel is a registered trademark of INCO)
### Diamalloy 4006
Chemistry: Ni 20Cr 10W 9Mo 4Cu 1C 1B 1Fe  
Particle Size: -53 + 11µm (-270 mesh +11 µm)  
Morphology: Spheroidal, Water Atomized  
Properties & Applications: Coatings offer sliding wear and corrosion protection. High hot hardness. Coatings resist scuffing and galling. Coatings contain glassy (amorphous / microcrystalline) phases due to additions of refractory metals and metalloids enhancing corrosion resistance.

### AMDRY 1718
Chemistry: Ni 19Cr 18Fe 3Mo 5(Nb+Ta) 0.5Al 1Ti .05C  
Particle Size: -325 mesh +15 µm  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Oxidation and corrosion resistant up to approximately 1000°C (1850°F). Designed for use on superalloys, especially Inconel® 713 and 718. (Inconel is a registered trademark of INCO)

### Sulzer Metco 4538
Chemistry: Ni 23Fe 16Cr 1.5Si  
Particle Size: -45 +16 µm (-325 mesh +16 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Heat and oxidation resistant coatings.

### AMDRY 997
Chemistry: Ni 23Co 20Cr 8.5Al 4Ta 0.6Y  
Particle Size: -37 µm (-400 mesh)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Can be used as hot corrosion and oxidation resistant bond coats for thermal barrier coatings (TBC) of zirconia.

### AMDRY 365-1
Chemistry: Proprietary MCrAlY  
Particle Size: -45 +5 µm (-325 mesh +5 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Proprietary alloy available to approved users. The maximum operating temperature for the heat treated chambered-sprayed coatings is approximately 850°C (1560°F).

### AMDRY 373
Chemistry: Proprietary MCrAlY  
Particle Size: -45 +5.5 µm (-325 +5.5 µm)  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Proprietary alloy available to approved users. The maximum operating temperature for the heat treated chambered-sprayed coatings is approximately 850°C (1560°F).

### AMDRY 386
Chemistry: Proprietary MCrAlY  
Morphology: Spheroidal, Gas Atomized  
Properties & Applications: Proprietary alloy available to approved users. The maximum operating temperature for the heat treated chambered-sprayed coatings is approximately 850°C (1560°F).
## Carbide Powders / Chrome Carbide

### Metco 82VF-NS
- **Chemistry:** Cr$_3$C$_2$ 7(Ni 20Cr)
- **Particle Size:** -45 +5.5 µm (-325 mesh +5.5 µm)
- **Morphology:** Blend
- **Properties & Applications:** Best chromium carbide for resistance to high temperature fretting and wear. Recommended for PWA 257-2 coatings.
- **OEM Specifications:** Pratt Whitney PWA 1364

### Diamalloy 3005
- **Chemistry:** Cr$_3$C$_2$ 7(Ni 20Cr)
- **Particle Size:** -45 +5.5 µm (-325 mesh +5.5 µm)
- **Morphology:** Blend
- **Properties & Applications:** Best chromium carbide for resistance to high temperature fretting and wear. Recommend for use with Sulzer Metco DiamondJet® HVOF systems.
- **OEM Specifications:** Pratt Whitney PWA 36332

### Diamalloy 3007
- **Chemistry:** Cr$_3$C$_2$ 20(Ni 20Cr)
- **Particle Size:** -45 +5.5 µm (-325 mesh +5.5 µm)
- **Morphology:** Clad
- **Properties & Applications:** Coatings have the highest micro and macrohardness and finest as-sprayed surface finish of any Diamalloy chromium carbide. Recommended for severe abrasive and fretting wear applications in the temperature range between 540-815ºC (1000-1500ºF). Coatings exhibit excellent solid particle erosion resistance properties.
- **OEM Specifications:** GE B50TF263, Class A

### AMDRY 5260
- **Chemistry:** Cr$_3$C$_2$ 25(Ni 20Cr)
- **Particle Size:** -45 +11 µm (-325 mesh +11 µm)
- **Morphology:** Spheroidal, Agglomerated and Densified
- **Properties & Applications:** Good sliding properties. Produces dense erosion and corrosion resistant coatings.
- **OEM Specifications:** Pratt Whitney PWA 36333

### Diamalloy 3004
- **Chemistry:** Cr$_3$C$_2$ 25(Ni 20Cr)
- **Particle Size:** -45+ 5.5 µm (-325 mesh +5.5 µm)
- **Morphology:** Blend
- **Properties & Applications:** Recommended for use with Sulzer Metco Diamond Jet HVOF systems. Good abrasion, particle erosion, cavitation and fretting resistance up to 815ºC (1500ºF). Good corrosion resistance. Good hot gas corrosion resistance, particularly in sulphurous gases. Oxidation and erosion resistant up to approximately 900ºC (1650ºF). Applications: fuel rod mandrels and hot forming dies, hydraulic valves, tooling, machine parts, pump housing and wear protection of aluminum parts.

### Sulzer Metco 5255
- **Chemistry:** Cr$_3$C$_2$ 50(Ni 20Cr)
- **Particle Size:** -62 +7.8 µm
- **Morphology:** Blend
- **Properties & Applications:** High temperature erosion and corrosion resistant coatings.
- **OEM Specifications:** Pratt Whitney PWA 36333
### Diamalloy 3006
Chemistry: Cr<sub>3</sub>C<sub>2</sub> 50(Ni 20Cr)
Particle Size: -88 +5.5 µm
Morphology: Clad
Properties & Applications: High NiChrome content produces coatings that are very tough. Recommended for applications requiring resistance to wear by hard surfaces and abrasive particles at elevated temperatures between 540-815ºC (1000-1500ºF).

### Sulzer Metco 5241
Chemistry: Cr 39Ni 7C
Particle Size: -63 µm (-170 mesh)
Morphology: Proprietary
Properties & Applications: Ideal for hard chrome replacement. Higher deposition efficiency compared to other HVOF sprayed chromium carbide powders. Lower oxide-containing coatings, lower carbon loss during spraying. Excellent erosion and oxidation properties up to 900ºC (1650ºF). Good wear properties and corrosion resistance. Excellent superfinished surface (0.25 µm, 1 µin.). Applications: ball valves, hydraulic rods, boiler tubes, stationary and flight turbine components, textile rolls, exhaust stacks.
**Sulzer Metco 5810**
Chemistry: WC 12Co  
Particle Size: -63 +11 µm (-230 mesh +11 µm)  
Morphology: Spherical Composite  

**Sulzer Metco 5812**
Chemistry: WC 12Co  
Particle Size: -53 +11 µm (-270 mesh +11 µm)  
Morphology: Agglomerated and Sintered  

**New! EU Diamalloy 5814**
Chemistry: WC 12Co  
Particle Size: -38 +15 µm (-400 mesh +15 µm)  
Morphology: Agglomerated and Sintered  
Properties & Applications: Produces hard and very dense coatings with a smooth as-sprayed surface finish that are resistant to abrasion, erosion and sliding wear and have good resistance to fretting. Recommended for machine parts and pump housings. Not recommended for corrosive environments.

**New! EU Diamalloy 5814F**
Chemistry: WC 12Co  
Particle Size: -22 +5 µm  
Morphology: Agglomerated and Sintered  
Properties & Applications: Produces hard and very dense coatings with a very smooth as-sprayed surface finish that are resistant to abrasion, erosion and sliding wear and have good resistance to fretting. Recommended for machine parts and pump housings. Not recommended for corrosive environments. Not for use with Diamond Jet equipment; should only be used with HVOF equipment that accepts fine powders.

**New! AM Diamalloy 5815**
Chemistry: WC 12Co  
Particle Size: Sized for Diamond Jet and kerosene-based HVOF guns  
Morphology: Agglomerated and Sintered  
Properties & Applications: Resistance against abrasion, erosion and sliding wear. Recommended for use on sucker rod couplings, exhaust fans, conveyor screws, thread guides, impeller shafts, anti-galling sleeves, oil field ball and gate valves.

**New! Diamalloy 5872NS**
Chemistry: WC 12Co  
Particle Size: -32 +3 µm  
Morphology: Agglomerated and Sintered  

**OEM Specifications:**  
GE B50TF27 S8, Class A (chemistry only)
Carbide Powders / Tungsten Carbide (Continued)

**Diamalloy 2004**
Chemistry: WC 12Co
Particle Size: -45 +5 µm (-325 mesh +5 µm)
Morphology: Sintered
Properties & Applications: Resistant to abrasion and erosion. Good sliding wear resistance. Diamalloy 2004 produces superior coatings for abrasion and erosion resistance. Do not use above 500ºC (930ºF) or in corrosive media. Coatings are hard and dense with good bond strengths. Good fretting resistance. Used for machine parts, pump housing, etc.

**Diamalloy 2003**
Chemistry: Wc / WC 12Co
Particle Size: -45 +5.5 µm (-325 mesh +5.5 µm)
Morphology: Fused
Properties & Applications: Resistant to abrasion and erosion. Good sliding wear resistance. Do not use above 500ºC (930ºF) or in corrosive media. Coatings are hard and dense with good bond strengths. Good fretting resistance. Used for machine parts, pump housing, etc.

**AMDRY 5843**
Chemistry: WC 10Co 4Cr
Particle Size: -45 + 11 µm (-325 + 11 µm)
Morphology: Blocky, Sintered and Crushed

**New! Diamalloy 5844**
Chemistry: WC 10Co 4Cr
Particle Size: -38 +15 µm (-400 mesh +15 µm)
Morphology: Agglomerated and Sintered
Properties & Applications: Produces very hard and dense coatings with a very smooth as-sprayed surface finish. Coatings are abrasion and erosion resistant and may be used in aqueous and wet corrosive environments. Recommended for use on paper manufacturing machinery and as a replacement for hard chrome plate.

**Sulzer Metco 5847**
Chemistry: WC 10Co 4Cr
Particle Size: -53 + 11 µm (-270 mesh + 11 µm)
Morphology: Agglomerated and Sintered

**New! Diamalloy 5848**
Chemistry: WC 10Co 4Cr
Particle Size: Sized for Diamond Jet and kerosene-based HVOF guns
Morphology: Agglomerated and Sintered
Properties & Applications: Resistance against abrasion and erosion in corrosive environments. Recommended for use on slurry pump components, hydroelectric power plant turbine parts, and as an alternative to hard chrome plating.

**OEM Specifications:**
- **GE B50TF27 S8, Class B** *(made to order only)*
- **Honeywell Allied Signal EMS 57736** *(except physical and chemistry - made to order only)*

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**New! Diamalloy 5849**
Chemistry: WC 10Co 4Cr
Particle Size: -45 + 11 µm (-325 + 11 µm)
Morphology: Sintered and Crushed

**New! EU Diamalloy 5834**
Chemistry: WC 10Co 4Cr 1Ni
Particle Size: -38 +15 µm (-400 mesh +15 µm)
Morphology: Agglomerated and Sintered
Properties & Applications: Produces very dense coatings with a smooth as-sprayed surface finish and good hardness. Sprays with high deposition efficiency. Coatings are abrasion and erosion resistant and may be used to resist corrosion in aqueous environments. Recommended for use on paper manufacturing machinery and as a replacement for hard chrome plate.

**New! EU Diamalloy 5824**
Chemistry: WC 17Co
Particle Size: -38 +15 µm (-400 mesh +15 µm)
Morphology: Agglomerated and Sintered
Properties & Applications: Produces tough, dense coatings with a smooth as-sprayed surface finish with good resistance to abrasion, erosion and sliding wear and have good resistance to fretting. Recommended for machine roll applications where resistance to impact is required. Not for use at temperatures above 500 ºC (930 ºF) or in corrosive environments.

**Diamalloy 5826**
Chemistry: WC 17Co
Particle Size: Sized for Diamond Jet and kerosene-based HVOF guns
Morphology: Agglomerated and Sintered
Properties & Applications: Higher toughness and fretting resistance than carbide coatings with a 12% Co resulting from the higher cobalt levels. Resists against abrasion, erosion and sliding wear. Typical applications include aircraft flap tracks, sucker rod couplings, extrusion dies, exhaust fans, wire drawing capstans and impeller shafts (hard bearings) Not for use at temperatures above 500 ºC (930 ºF) or in corrosive environments.

**Metco 73F**
Chemistry: WC 17Co
Particle Size: -53 +11 µm (-270 mesh +11 µm)
Morphology: Spray Dried / Sintered
Diamalloy 2005NS
Chemistry: WC 17Co
Particle Size: -53 +11 µm (-270 mesh +11 µm)
Morphology: Spray Dried / Sintered
Properties & Applications: Suitable for hard chrome replacement. Higher toughness and fretting resistance than 12% Co coatings due to higher cobalt levels. For protection against sliding wear, hammer wear, abrasion and fretting. Do not use above 500ºC (930ºF) or in corrosive media. Applications: mid-span stiffeners (gas turbine engine blades), aircraft flap tracks, sucker rod couplings, extrusion dies and exhaust fans.

OEM Specifications:
- Boeing BMS 10-67, Type I
- Chemtronics Op. Man. 5.4.3
- de Havilland DHMS C4.19
- GE B50TF167, Class A
- Pratt Whitney PWA 36331-2
- Rolls-Royce Allison EMS 39660
- Volvo PM 819-63

Diamalloy 2006
Chemistry: WC 17Co
Particle Size: -30 +5.5 µm
Morphology: Spray Dried / Sintered
Properties & Applications: Suitable for hard chrome replacement. Higher toughness and fretting resistance than 12% Co coatings due to higher cobalt levels. For protection against sliding wear, hammer wear, abrasion and fretting. Do not use above 500ºC (930ºF) or in corrosive media. Applications: mid-span stiffeners (gas turbine engine blades), aircraft flap tracks, sucker rod couplings, extrusion dies and exhaust fans.

Sulzer Metco 5845
Chemistry: WC 20CrC 7Ni
Particle Size: -45 +11 µm (-325 mesh +11 µm)
Morphology: Sintered
Properties & Applications: Coatings provide resistance to wear at higher temperatures; provides protection in chemical environments of lye and organic acids. Cobalt free. Used in the nuclear and in the paper industries. Formerly supplied as XPT-D-970.

Sulzer Metco 5846
Chemistry: WC 20CrC 7Ni
Particle Size: -38 +15 µm (-400 mesh +15 µm)
Morphology: Agglomerated and Sintered
Properties & Applications: Coatings provide resistance to wear at higher temperatures; provides protection in chemical environments of lye and organic acids. Smooth as-sprayed surface finish with high deposit efficiency. Cobalt free. Used in the nuclear and in the paper industries. Formerly supplied as XPT-D-1054.

Sulzer Metco 5803
Chemistry: (WC 12Co) 25(Ni-Based Superalloy)
Particle Size: -45 +11 µm (-325 mesh +11 µm)
Morphology: Blend

Sulzer Metco 5860
Chemistry: WC 12Co 35(Cr3C2 / 20(Ni 20Cr))
Particle Size: -45 +5.5 µm (-325 mesh +5.5 µm)
Morphology: Blend

OEM Specifications:
- U. S. Military MIL-STD-1687
Self-Fluxing Powders / Nickel Base

**Diamalloy 2001**

Chemistry: Ni 17Cr 4Fe 4Si 3.5B 1C  
Particle Size: -45 +15 µm (-325 mesh +15 µm)  
Morphology: Spheroidal, Gas Atomized  

**Diamalloy 2002**

Chemistry: (WC 12Co) 33Ni 9Cr 3.5Fe 2Si 2B 0.5C  
Particle Size: -45 +11 µm (-325 mesh +11µm)  
Morphology: Blend  
Properties & Applications: Coatings are very dense and effectively resist wear by abrasive grains, hard surfaces, particle erosion/abrasion and fretting at temperatures to 540ºC (1000ºF).
Global Solutions and Services Essential to Business Success

Sulzer Metco is a global leader in surface engineering solutions and services, offering:

- a broad range of thermal spray, thin film and other advanced surface technology equipment, integrated systems and materials
- specialized coating and surface enhancement services
- manufactured components for the turbine, automotive and other industries
- global customer support services

Sulzer Metco provides a global manufacturing, distribution and service network and caters to aerospace, power generation, automotive and other strategic growth industries. To take control of your surface engineering challenges, contact your Sulzer Metco sales office, visit our website at www.sulzermetco.com or email us at info@sulzermetco.com.

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